

ABSTRACT OF SANITARY REPORTS.

VOL. VIII.

WASHINGTON, D. C., APRIL 7, 1893.

No. 14.

TREASURY DEPARTMENT, U. S. Marine Hospital Service.—Published in accordance with act of Congress approved February 15, 1893.

UNITED STATES.

SPECIAL REPORTS.

Board of medical officers convened to prepare maritime quarantine rules and regulations for United States ports.

WASHINGTON, D. C., March 10, 1893.

SIR: I beg leave, herewith, to invite your attention to "An act granting additional quarantine powers and imposing additional duties upon the Marine-Hospital Service," approved February 15, 1893, and to section 4 thereof, which states "That it shall be the duty of the Supervising Surgeon-General of the Marine-Hospital Service, under the direction of the Secretary of the Treasury, to perform all the duties in respect to quarantine and quarantine regulations which are provided for by this act," etc.

Also, to section 3 and section 5.

Referring to these sections, I have to submit for your approval a detail of officers of the Marine-Hospital Service to constitute a board to prepare such rules and regulations for the government of the maritime quarantine stations of the United States, and to secure such uniformity in administration as is prescribed in the law; the proceedings of the board to be reviewed by myself and transmitted with my recommendations.

Detail for the board.—Surg. H. W. Austin, U. S. M. H. S.; Surg. H. R. Carter, U. S. M. H. S.; Passed Assistant Surg. J. J. Kinyoun, U. S. M. H. S.; Passed Assistant Surg. H. D. Geddings, U. S. M. H. S.

Respectfully yours,

WALTER WYMAN,
Supervising Surgeon-General M. H. S.

To the Hon. SECRETARY OF THE TREASURY.

Approved:

J. G. CARLISLE, *Secretary.*

In accordance with the above order, the board convened March 10, 1893, and after careful examination of the quarantine rules and regulations of the various seacoast cities of the United States, rules and regulations to be observed at the maritime quarantine stations of the United States were formulated and submitted to the Supervising Surgeon-General. Upon the recommendation of that officer they have been approved by the Secretary of the Treasury.

*Suggestions relative to the disinfection of cargoes in bulk by sulphur dioxide—
In re. sugar and other cargoes.*

Article VII, paragraph 7, of the United States Quarantine Laws and Regulations, provides that cargoes of sugar and the like should be disinfected by exposure to sulphur dioxide in 10 per cent strength, and for a period of exposure not less than twelve hours.

The following procedures are suggested for you in the process of disinfection when disinfection is required :

In all cases the sugar should be so stored within the hold as to permit a thorough permeation of the sulphur dioxide. This can be accomplished by placing between the rows of sugar sacks or bags the dunnage wood, and by causing a framework to be constructed for each compartment, so that an opening or a well will be left down through the cargo to the skin of the vessel.

A sulphur-dioxide solution in a 10 per cent strength can not be generated by the open or pot plan; either a sulphur furnace will have to be constructed or liquid sulphur dioxide be used. The latter is preferable, as it can be had, we are informed, at a very small cost at any of the ports of Germany. If the sulphur-dioxide fumigation is used for any such cargoes, the hatches should be battened down and sealed, in order that duration of exposure will be longer than the time mentioned above. This, it is thought, will insure thorough disinfection of all portions of the articles liable to convey infection, and will facilitate the discharge of the vessel from quarantine in American ports.

One case of smallpox at San Francisco Quarantine Station.

Passed Assistant Surg. Carmichael telegraphs as follows :

APRIL 4, 1893.

Pacific mail steamer *City of New York*, from Panama, March 18, arrived to-day. Thirty-three cabin passengers, 20 steerage passengers, and 96 in crew. One case of smallpox developed in cabin April 3; received at station with two attendants to-day. Thirty passengers from vessel landed at San Diego April 2.

Reports of States, and yearly and monthly reports of cities.

CALIFORNIA.—Reports to the State board of health from 98 cities, towns, and villages, having an aggregate population of 801,581, show a total of 1,019 deaths, including phthisis pulmonalis, 187; smallpox, 3; enteric fever, 18; scarlet fever, 14; diphtheria, 21; and whooping cough, 3.

IOWA.—Month of February, 1893. The following mortuary report is extracted from the Monthly Bulletin for March :

Burlington.—February. Consumption, 8; pneumonia, 4; scarlet fever, 4; spinal meningitis, 1. Total deaths, 31, of which 14 were of persons over 60 years. Population, 25,000. Death rate per 1,000, 1.5. For January, 1.5.

Cedar Rapids.—No report.

Clinton.—No report.

Council Bluffs.—February. Consumption 4; pneumonia, 3; diphtheria, 1. Total deaths, 22. Population (estimated), 35,000. Death rate per 1,000, 0.06. For January, 0.06.

Davenport.—February. Diphtheria, 2; scarlet fever, 1; consumption, 1; pneumonia, 1; typhoid fever, 1. Total deaths, 28. Population (estimated), 34,500. Death rate per 1,000, 0.84+. For January, 1+.

Des Moines.—February. Consumption, 2; pneumonia, 2; diphtheria, 6; meningitis, 2. Total deaths, 61. Population, 70,000. Death rate per 1,000, 0.8+. For January, 0.7.

Dubuque.—February. Diphtheria, 1; scarlet fever, 1; typhoid fever, 1; consumption, 3; pneumonia, 5; meningitis, 1. Total deaths, 30, of which 11 were persons over 60 years, and 2 over 80. Death rate per 1,000, 0.8. For January, 0.9.

Fort Dodge.—February. Typhoid fever, 1. Total deaths, 2. Population, 6,000. Death rate per 1,000, 0.3+. For January, 1.

Keokuk.—February. Consumption, 5; pneumonia, 3; meningitis, 1. Total deaths, 22. Over 60 years of age, 7. Population, 19,261. Death rate per 1,000, 1.3. For January, 1.3.

Muscatine.—No report.

Oskaloosa.—No report.

Ottumwa.—No report.

Sioux City.—No report.

MICHIGAN.—Week ended March 25, 1893. Reports to the State board of health, Lansing, from 72 observers indicate that erysipelas and pleuritis increased, and that intermittent fever and diarrhea decreased in area of prevalence. Diphtheria was reported present during the week at 20 places, scarlet fever at 49, measles at 22, and enteric fever at 15 places.

NEW YORK.—Month of February, 1893. Reports to the State board of health from 8 districts, including New York, Brooklyn, and 146 other cities, towns, and villages, show a total of 8,353 deaths, including phthisis pulmonalis, 954; smallpox, 23; typhus fever, 41; enteric

fever, 101; scarlet fever, 198; diphtheria and croup, 480; measles, 80; and whooping cough, 121.

NEW HAMPSHIRE—*Manchester*.—Month of February, 1893. Population, 48,500. Total deaths, 76, including phthisis pulmonalis 5 and scarlet fever 1.

RHODE ISLAND.—Month of February, 1893. Reports to the State board of health from cities and towns having an aggregate population of 313,094 show a total of 487 deaths; including phthisis pulmonalis, 40; enteric fever, 3; typhus fever, 1; scarlet fever, 14; diphtheria, 6; and whooping cough, 1.

TENNESSEE.—Month of February, 1893. Reports to the State board of health from 7 cities, having an aggregate population of 249,968, show a total of 339 deaths, including phthisis pulmonalis, 70; enteric fever, 3; diphtheria and croup, 7; measles, 1; and whooping cough, 5.

VIRGINIA—*Lynchburg*.—Month of March, 1893. Population, 30,000. Total deaths, 39, including phthisis pulmonalis, 7; and scarlet fever, 1.

Publications received.

Fourteenth Annual Report of the Board of Health of the City of Memphis, Tenn., 1892.

Twelfth Annual Report of the State Board of Health of California, 1890-'92.

Thirty-ninth Registration Report of Rhode Island, 1891.

Report of the Board of Health of the City of Salem, Mass., 1892.

Report of the Board of Health of the City of Cambridge, Mass., 1892.

Report of the Medical Officer of Health of the City of Liverpool, England, 1892.

Twelfth Biennial Report of the State Board of Health of California, 1890-'92.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Comparative mortality table of certain cities of the United States for the year ended December 31, 1892 (as reported to the U. S. Marine-Hospital Bureau).

Cities.	Population U. S. Census, 1890.	Total deaths from all causes.	Annual death rate per 1,000 of the population.
New York, N. Y.	1,515,301	44,139	29.1
Chicago, Ill.	1,099,850	26,048	23.7
Philadelphia, Pa.	1,046,964	24,162	23.1
Brooklyn, N. Y.	806,343	20,690	25.6
Boston, Mass.	448,477	11,147	24.8
Baltimore, Md.	434,439	10,516	24.2
San Francisco, Cal.	298,997	6,477	21.7
Cincinnati, Ohio	296,908	5,979	20.2
Cleveland, Ohio	261,353	5,207	19.8
New Orleans, La.	242,039	7,467	30.9
Pittsburg, Pa.	238,617	5,412	22.7
Washington, D. C.	230,392	6,370	27.6
Detroit, Mich.	205,876	4,958	24.0
Milwaukee, Wis.	204,468	4,442	21.7
Newark, N. J.	181,830	5,111	28.1
Minneapolis, Minn.	164,738	2,558	15.5
Louisville, Ky.	161,129	3,129	19.4
Rochester, N. Y.	133,896	2,722	20.3
Kansas City, Mo.	132,716	1,649	12.4
Providence, R. I.	132,146	2,950	22.3
Toledo, Ohio	81,431	1,627	19.9
Richmond, Va.	81,388	2,054	25.2
Nashville, Tenn.	76,306	1,587	20.7
Fall River, Mass.	74,398	1,886	25.3
Erie, Pa.	40,634	832	20.4
Portland, Me.	36,426	795	21.8
Binghamton, N. Y.	35,005	685	19.6
Altoona, Pa.	35,000	694	19.8
Mobile, Ala.	31,076	883	28.4
Galveston, Tex.	29,084	713	24.5
Auburn, N. Y.	25,858	470	18.2
San Diego, Cal.	16,159	174	10.7
Pensacola, Fla.	11,750	289	24.5

The above list comprises the cities which furnished weekly reports to the Marine-Hospital Bureau throughout the year 1892.

No attempt is made in the table to give separate percentages for the white and colored population, which latter, with excessive death rate, forms so large a proportion of the total population of some of the Southern cities.

Table of temperature and rainfall, week ended March 27, 1893.

[Received from Department of Agriculture, Weather Bureau.]

Locality.	Temperature in degrees Fahrenheit.			Rainfall in inches and hun- dredths.		
	Normal.	*Excess.	*Defic'ny.	Normal.	Excess.	Deficiency.
New England States:						
Eastport, Me.	31	0		1.07		.89
Portland, Me.	33		0	.70		.37
Boston, Mass.	37	1		.98		.82
Block Island, R. I.	37	1		.89		.08
Woods Hole	40	3		1.12		
Middle Atlantic States:						
Albany, N. Y.	36		0	.63		.38
New York, N. Y.	40	1		.91		.34
Philadelphia, Pa.	40	3		.70		.51
Atlantic City, N. J.	40	2		.89		.78
Baltimore, Md.	44	2		.88		.71
Washington, D. C.	44	4		.95		.78
Lynchburg, Va.	47	5		.84		.79
Norfolk, Va.	49	3		1.05	.33	
South Atlantic States:						
Charlotte, N. C.	53	6		1.03		.46
Wilmington, N. C.	55	8		.93		.30
Charleston, S. C.	58	4		.91	.34	
Augusta, Ga.	58	4		1.17		.49
Savannah, Ga.	60	4		.84	.73	
Jacksonville, Fla.	63	4		.70	2.31	
Titusville, Fla.	67	3		.63	2.12	
Jupiter, Fla.	71	2		.37	3.58	
Key West, Fla.	73	4		.24		.24
Gulf States:						
Atlanta, Ga.	54	4		1.32		.75
Pensacola, Fla.	62	2		1.22	.41	
Mobile, Ala.	61	4		1.76		1.36
Montgomery, Ala.	59	4		1.36		.43
Vicksburg, Miss.	60	1		1.47		.36
New Orleans, La.	64	3		1.33		.16
Shreveport, La.	61	1		1.08		.73
Fort Smith, Ark.	54	2		.69		.28
Little Rock, Ark.	56	1		1.03	1.08	
Palestine, Tex.	61	3		.98		.10
Galveston, Tex.	64	2		.70		.70
San Antonio, Tex.	64	3		.71		.57
Corpus Christi, Tex.	66	3		.35		.34
Ohio Valley and Tennessee:						
Memphis, Tenn.	55	2		1.26		.45
Nashville, Tenn.	51	3		1.12	.38	
Chattanooga, Tenn.	53	6		1.38		.51
Knoxville, Tenn.	50			1.26		.69
Louisville, Ky.	48	3		.96	.07	
Indianapolis, Ind.	43	0		.88	.42	
Cincinnati, Ohio.	45	3		.77	.07	
Columbus, Ohio.	41	3		.70	.16	
Pittsburg, Pa.	42	4		.67		.23
Lake Region:						
Oswego, N. Y.	32	1		.60		.38
Rochester, N. Y.	33	3		.70		.40
Buffalo, N. Y.	32	3		.59		.07
Erie, Pa.	35	3		.63	.09	
Cleveland, Ohio	36	4		.63	.53	
Sandusky, Ohio	37	3		.56	.10	
Toledo, Ohio	37	1		.49	.03	
Detroit, Mich.	36	1		.54		.14
Port Huron, Mich.	31	3		.63		.06
Alpena, Mich.	26	1		.47	.59	
Marquette, Mich.	25		7	.25	1.04	
Grand Haven, Mich.	34		1	.56	.53	
Milwaukee, Wis.	32		1	.56	.79	
Chicago, Ill.	35		2	.60		.11
Duluth, Minn.	27		5	.35	.41	
Upper Mississippi Valley:						
St. Paul, Minn.	33		6	.35	.76	
La Crosse, Wis.	35		4	.98	.40	
Dubuque, Iowa	37		3	.56	.38	
Davenport, Iowa	38		2	.49	.18	
Des Moines, Iowa	39		4	.34		.03

*The figures in these columns represent the average daily departure. To obtain the average weekly departure these should be multiplied by seven.

Table of temperature and rainfall, week ended March 27, 1893—Continued.

Locality.	Temperature in degrees Fahrenheit.			Rainfall in inches and hun- dredths.		
	Normal.	*Excess.	*Defic'ncy.	Normal.	Excess.	Deficiency.
Upper Mississippi Valley—Cont'd.						
Keokuk, Iowa.....	41	.....	4	.49	.09	.....
Springfield, Ill.....	43	.....	1	.55	1.48	.....
Cairo, Ill.....	50	.....	1	.84	.53	.....
St. Louis, Mo.....	47	.....	0	.70	2.21	.....
Missouri Valley:						
Springfield, Mo.....	48	0	.....	.77	.....	.10
Kansas City, Mo.....	45	.....	3	.49	.88	.....
Concordia, Kans.....	43	.....	6	.51	.....	.31
Omaha, Nebr.....	40	.....	8	.42	.25	.....
Yankton, S. Dak.....	36	.....	10	.30	.19	.....
Valentine, Nebr.....	37	.....	11	.28	.32	.....
Huron, S. Dak.....	34	.....	14	.14	.77	.....
Pierre, S. Dak.....	35	.....	16	.15	.63	.....
Extreme Northwest:						
Moorehead, Minn.....	25	.....	12	.18	.59	.....
St. Vincent, Minn.....	21	.....	10	.18	.02	.....
Bismarck, N. Dak.....	29	.....	18	.23	.79	.....
Fort Buford, N. Dak.....	30	.....	12	.12	.....	.06
Rocky Mountain Slope:						
Havre, Mont.....	34	.....	14	.14	.....	.12
Helena, Mont.....	37	.....	3	.14	.....	.09
Rapid City, S. D.....	35	.....	9	.22	.47	.....
Spokane, Wash†.....	45	.....	2	.35	.82	.....
Walla Walla, Wash.....	43	.....	2	.21	.05	.....
Winnemucca, Nev.....	43	.....	4	.44	1.01	.....
Salt Lake City, Utah.....	44	.....	6	.14	.16	.....
Cheyenne, Wyo.....	37	.....	9	.14	.....	.....
North Platte, Nebr.....	40	.....	4	.14	.....	.04
Denver, Colo.....	42	.....	5	.26	.....	.10
Montrose, Colo.....	43	.....	3	.12	.52	.....
Pueblo, Colo.....	44	.....	3	.16	.....	.16
Dodge City, Kans.....	46	.....	3	.21	.....	.21
Abilene, Tex.....	58	1	.....	.41	.....	.41
El Paso, Tex.....	58	.....	3	.07	.....	.07
Santa Fe, N. Mex.....	42	.....	5	.20	.53	.....
Tucson, Ariz.....	61	.....	5	.20	.22	.....
Pacific Coast:						
Olympia, Wash.....	46	.....	2	1.03	1.07	.....
Portland, Oregon†.....	50	.....	0	.70	.....	.27
Roseburg, Oregon.....	57	.....	.....	.76	.....	.28
Red Bluff, Cal.....	57	.....	3	.70	.....	.68
Sacramento, Cal.....	57	.....	3	.70	.....	.46
San Francisco, Cal.....	55	.....	3	.70	.....	.06
Fresno City, Cal.....	57	.....	3	.32	.....	.....
Los Angeles, Cal.....	59	.....	1	.58	.76	.....
San Diego, Cal.....	58	.....	1	.28	1.58	.....
Yuma, Ariz.....	67	.....	3	.00	.54	.....

*The figures in these columns represent the average daily departure. To obtain the average weekly departure these should be multiplied by seven.

† Missing.

FOREIGN.

(Reports received through the Department of State and other channels.)

Disinfection of immigrants' baggage at Halifax, Nova Scotia.

MARCH 27, 1893.

SIR: I have the honor to report that the steamship *Labrador* arrived March 25 with over 900 immigrants; over 200 of these remained on board and were taken to Portland. The steamship *Baumwall*, from Hamburg and Antwerp, arrived March 26 with over 400 immigrants. The baggage of all United States immigrants from the steamship *Labrador* was fumigated. The baggage of all immigrants from the steamship *Baumwall* was fumigated. The *Labrador* arrived at 4 p. m. Saturday, and the process of fumigation was completed at 8 a. m. Sunday. The steamship *Baumwall* arrived at her dock at 9 a. m. Sunday, the process of fumigation was completed at 9 p. m., Sunday. The following countries were represented: England, Germany, Poland, Italy, Austria, Russia, Denmark, Belgium, France, and Hungary. There were two other immigrant ships due last week, but have not arrived.

Very respectfully,

ALEXANDER B. McDOWELL,

Sanitary Inspector, M. H. S.

To the SUPERVISING SURGEON-GENERAL M. H. S.

MARCH 30, 1893.

SIR: I have the honor to report that the steamship *Lake Superior* arrived March 28 with 436 immigrants, the *Buenos Ayrean* arrived March 29 with 568 immigrants. The baggage of all United States immigrants was fumigated. Two immigrants from the *Lake Superior* were taken ill in the immigrants' shed. A probable diagnosis of gastric irritation, due to poisonous food, was made. Cholera was absolutely excluded. The possibility of smallpox or typhus occurred to me at first, and I was prepared, in case it proved to be either, to have the other immigrants detained at border. Later, smallpox and typhus were excluded. The sensational reports were sent out by Associated Press, based upon the fact that two immigrants were ill and one of them had vomited. I wired you, as soon as it became known here, contradicting the report. I will send you in a day or two a full report. The *Parisian*, with 1,200 immigrants, is due to-morrow. I have very little time for reporting; have been almost continuously engaged for the last six days.

Very respectfully,

ALEXANDER B. McDOWELL,

Sanitary Inspector, M. H. S.

To the SUPERVISING SURGEON-GENERAL M. H. S.

Steam disinfection of all immigrants' baggage at Halifax.

The Supervising Surgeon-General has been informed by J. Lowe, esq., deputy minister of agriculture, that the baggage of all European immigrants landing at Halifax, and bound for the United States, will hereafter be disinfected by steam.

Cholera in Russia.

UNITED STATES CONSULATE,
Odessa, Russia, March 6, 1893.

SIR: It is now admitted officially that Asiatic cholera in an epidemic form has existed, and still exists, in the governments of Podolia, Kieff, and Bessarabia, which are within the jurisdiction of the Odessa consular district. I have also to report that from information received from private but reliable sources cholera has again made its appearance at Rostoff-on-Don. Odessa and vicinity are not reported officially to be affected. I am informed by trustworthy authority that more than 40 deaths occurred here last week from smallpox, but this is no doubt an error, as the official returns for the week show but 2 deaths. Frankly, I am bound, as a matter of duty, to state that I have no confidence whatever in the official returns, nor would I advise the Department to place any dependence upon them. In the district of Chotin, in the government of Bessarabia, during one week there were more than 200 cases of cholera, with 62 deaths; in Podolia more than 500 cases, with 220 deaths. The returns from Kieff I do not know, but there were certainly a great many deaths. Precautionary measures of the most stringent character are necessary if this dreaded scourge is to be kept out of the United States during the present season. The immigration from Russia will be very large, and, I may add, of a very dangerous character this year to the public health of America unless our sanitary authorities exercise not only great care, but great severity, if necessary, in dealing with such immigrants. The Russian peasant, whether he be Jew or Gentile, has an affection which almost amounts to veneration for old clothes; and as considerations of a public character, such as the health of a community, never enter into his calculations, the consequences attending his entrance into the United States will be far-reaching and sad, unless prompt measures are resorted to in view of the danger.

I am, sir, your obedient servant,

THOMAS E. HEENAN,
Consul.

To Hon. WILLIAM F. WHARTON,
Assistant Secretary of State.

Reappearance of cholera at Lorient, France.

UNITED STATES CONSULATE,
Nantes, March 16, 1893.

SIR: I have the honor to report that cholera has again appeared at Lorient, as shown by the inclosed report. I have directed the United States consular agent at that place to send me a weekly report to forward to the State Department.

The sanitary condition of Nantes is good.

* * * * *

I am, sir, your obedient servant,

H. DE SALLIER DUPIN,
United States Consul.

To Hon. WILLIAM F. WHARTON,
Assistant Secretary of State.

[Inclosure.]

During the period from the 2d of March to the 13th, 1893, there were 56 cases of cholera under treatment and 6 deaths therefrom in the town of Lorient, France.

Sanitary commission at Constantinople—Report of the United States sanitary commissioner.

[Report No. 63.]

CONSTANTINOPLE, March 5, 1893.

The news from cholera-infected countries being good, the quarantines have been abolished by decision of the International Sanitary Commission.

By decision of this same commission the question of the condition of lazarettos has to be studied in order to improve them and present the complaints of travelers and traders. Nearly all travelers were nearly frozen during the bad weather on account of the bad condition of the lazarettos.

In the report sent by the sanitary physician at Kermanshah, in Persia, I read the following very interesting fact: Dr. Tzelebis, the above-mentioned sanitary physician, states that during the last cholera epidemic not a single case of cholera was observed among the Israelites of Kermanshah. This fact is to be attributed to the fact that the Jews of the above-mentioned town do not drink the river water as the Moslem inhabitants do, but they drink the well water, which wells are dug within the houses.

I do not think it necessary to remind you that all the rivers of Persia as well as those of Turkey are polluted; the riparian inhabitants throwing in the rivers all the filthiness. I must not omit to state that the corpses are washed in the rivers from which they drink the water.

At Smyrna smallpox is raging fiercely. I do not know whether the local authorities have taken any steps to check the spread of the epidemic. The same thing I have to report for Salonica where diphtheria is raging.

In the capital the influenza has made its appearance, but it is of a mild character.

Other prevailing diseases are sore throat (*Angina follicularis*), broncho-pneumonia, and smallpox, which has been raging during four or five years.

S. C. ZAVITZIANO.

Measures taken at Hamburg, Germany, to prevent the return of epidemic of cholera.

UNITED STATES CONSULATE,
Hamburg, Germany, March 18, 1893.

SIR: I have the honor to transmit the following report on the measures taken in anticipation of a return of the cholera epidemic in Hamburg. Great activity characterizes the various city departments, particularly those concerned with the public health. A total of \$1,000,000 has been expended by the city since the outbreak of the epidemic last summer for cholera purposes.

REPORTING CASES.

Physicians are required to report at once every case of cholera, or suspicious cases, to the medical bureau. The heads of households or the masters of ships are obligated to report to the police authorities all cases of cholera or suspicious cases of cholera coming under their notice.

THE EXAMINATION OF CASES.

A bacteriological examination is made of the alvine discharges of every case reported. This work is done at the Hygienic Institute or at the laboratories of the medical bureau or the city hospitals.

As soon as the diagnosis of Asiatic cholera is established the fact is reported telegraphically to the department of health at Berlin, and published in one of the local newspapers.

Through the courtesy of the cholera commission of the senate, daily reports are sent to the United States consulate for information in making out the bills of health.

The medical bureau sends a physician to examine into the conditions and circumstances surrounding each case reported. The physician recommends in each particular case the measures to be taken in order to destroy the contagion and prevent the spread of the disease.

CHOLERA HOSPITALS.

There are five cholera camps situated in various quarters of the city, all well appointed and ready for service. The camps are all built on the same general plan. They are for the most part on ground connected with one of the larger hospitals. They consist of one-story wooden barracks, designed after the models of modern pavilion hospital wards. Each barrack will accommodate from 25 to 35 patients. There are in all 26 newly-built barracks, with a capacity of 822 beds ready for occupancy.

Other pavilions, as well as the so-called smallpox wards at the old City Hospital, may be called upon for cholera purposes if found necessary. This makes an addition of 450 beds.

Besides these, the field lazaretto furnished by the minister of war during the last epidemic will in case of need probably again be placed at the disposal of the Hamburg authorities.

The cholera hospitals are situated as follows:

Newly built and ready for occupancy: (1) At the Neuen Allgemeinen Krankenhaus, 7 barracks, 250 beds. (2) At the Alten Allgemeinen Krankenhaus, 8 barracks, 256 beds. (3) At the Seaman's Hospital, 4 barracks, 96 beds. (4) At the Marien Krankenhaus, 4 barracks, 110 beds. (5) At the Vereins Hospital, 3 barracks, 110 beds. Total of 26 barracks, 822 beds.

The following can be turned over at any time for the use of cholera patients: (1) At the Neuen Allgemeinen Krankenhaus, 6 barracks, 120 beds; other pavilions, 150 beds. (2) At the Alten Allgemeinen Krankenhaus, smallpox wards, 120 beds; 2 barracks, 60 beds. Total of 450 beds. Being a grand total of 1,272 beds.

TRANSPORTATION OF THE SICK AND DEAD.

Cabs (droschken) and other public conveyances must not be used for the transportation of the sick.

Each case of sickness will be transported separately in ambulances provided for this purpose. The management of this department will not only be conducted from a central station, but from agencies in the suburbs and more distant parts of the city, so that there may be as little delay as possible in the transportation of the sick and the removal of the dead.

There are 28 ambulances and 10 covered conveyances for the dead ready for service. There are 60 wagons and 240 teams held in reserve, to be used as ambulances, and 20 vehicles with 60 horses to be used for removing the dead should the above numbers prove insufficient.

In order to provide for identification, transporteurs are directed to carefully take the name and necessary data of each case.

The mortuaries, morgues, and deadhouses, in connection with the hospitals and cholera camps, will together accommodate 1,000 bodies. It found necessary, more room is at the disposal of the authorities. The burials will be undertaken by private companies.

The dead bodies are wrapped in a cloth saturated with 5 per cent carbolic-acid solution and buried underground in the usual way.

A bacteriological examination of the ground about the bodies and of the water drained from the burial places has failed to discover the presence of comma bacilli.

One crematory, with a rather limited capacity, has been erected since the outbreak of the epidemic.

THE DISINFECTION.

Every dwelling in which a case of cholera occurs will be disinfected. The disinfection is done by a detachment sent out from police headquarters.

It is provided for that in case of a business or stall being concerned, the business must be suspended until the completion of the disinfection. Special attention will be paid to such cases when the trade is in edibles or wares liable to carry infection. Whenever it is considered necessary, such articles will be destroyed.

Bedding, clothing, and furniture which have come in contact with the case will be turned over to one of the city's disinfecting establishments. Articles not capable of disinfection are burned.

There are at present two large steam disinfecting plants operated by the city. These plants are provided with large cylinders with steam connections providing for hot air or live steam. The articles to be disinfected are either hung up or spread out on trays, according to the character of the goods. The time of exposure varies according to the article.

Clothing is first exposed to dry hot air at 90° C. for twenty minutes; then to live steam at a temperature of 102° to 104° C. and pressure of 0.1 atmosphere for thirty-five minutes, and again to hot air, in order to dry.

The disinfecting plants are so constructed with a dividing wall that the side where the soiled articles are received is not in direct communication with the "clean side," where the steamed articles are distributed.

Leather articles and goods not capable of disinfection by steam are first cleaned mechanically with soap and warm water, and then immersed into a 5 per cent carbolic-acid solution, and allowed to dry slowly.

The workmen are trained hands under the supervision of the police authorities. They are required to wear disinfected linen gowns and to take the precautions for personal cleanliness usually seen in a surgical operating room.

In addition to these two city disinfecting establishments, there are steam-disinfecting plants at the various hospitals and cholera camps.

Should it be found necessary, the city is prepared to erect six more similar establishments at short notice.

The disinfection of the dwellings is done by detachments, usually of three men, under the command of a constable.

These men, employed by the police authorities, are experienced hands, for they have enjoyed the training of having disinfected 200 dwellings during the epidemic last summer and fall.

The personnel all wear linen dusters similar to the ones mentioned above, and are required to disinfect themselves at the completion of their work.

There are four rooms for fumigation by sulphur, which are exclusively used by shippers for disinfecting merchandise. This work is attended to by a sworn chemist, appointed by the chamber of commerce and approved by the senate of the state of Hamburg.

The disinfection of sewerage is but partially accomplished. There are double cisterns at the cholera hospital at Eppendorf for the reception of the sewerage, while the disinfection is accomplished with chloride of lime.

The other cholera hospitals were built with single cisterns, which were found to be inoperative.

CHOLERA PARTICULARLY ON SHIPS.

Should a case of cholera occur on a ship the patient will be at once transferred to one of the hospitals, and the ship, as well as all things which patient has come in contact with, will be disinfected, as provided for above.

The further precautions taken will depend upon the circumstances of the case and the recommendations of the examining physician. The crew will either be transferred to the detention house "Concordia," where they will be held under observation six days, or, if allowed to remain on the ship, will be examined daily by a physician appointed for this purpose.

IMMIGRATION.

The forwarding of steerage passengers from the interior is closely watched by the police authorities. All immigrants from Russia, Austria, or other infected districts are required to remain under observation six days in the detention camp before being allowed to proceed. In some cases this time is extended, so that I have known several immigrants who spent two months in the barracks.

The bag and baggage of the immigrants is disinfected upon arrival.

Each immigrant is seen at least once a day by physicians appointed for this purpose.

PUBLIC BATHS.

All the public baths in the river Elbe and on the Alster have been closed. There are two swimming tanks which are supplied with water sterilized by boiling. Latterly a douche and shower bathing establishment has been opened, the water for which is all boiled.

THE WATER SUPPLY.

The improvement in the water supply has been made the subject of a special report. In order to prevent the direct contamination of the water from the river, vessels are not allowed to come to anchor or find wharfage 1 kilometer above or below the inlet pipe to the city water works.

Very respectfully, your obedient servant,

M. J. ROSENAU,
Assistant Surgeon, M. H. S.

To the SUPERVISING SURGEON-GENERAL M. H. S.

Smallpox in Antwerp, Belgium.

Assistant Surg. Rosenau cables, under date of March 5, from Antwerp, that smallpox is prevailing in that city.

Relative to reported cases of smallpox in Mexico.

The following report, dated March 26, 1893, has been received from the United States sanitary inspector at Eagle Pass, Tex.:

Since my last report I have had no reason to detain anyone. It has been reported to me that there were cases of smallpox in Ciudad Porfirio Diaz (ex Piedras Negras), Mexico, which town is just across the river opposite Eagle Pass. I have investigated the matter the best I could, but have so far been unable to find any. It is generally very difficult to find these cases of smallpox in Mexican towns, as they will not report them, and nearly always treat themselves.

Relative to additional quarantine stations in Brazil.

LEGATION OF THE UNITED STATES,
Petropolis, February 10, 1893.

SIR: In reference to the subject-matter of Department dispatch No. 206, I have the honor to report that on the 28th of January last, pursuant to instructions contained therein, Mr. Conger expressed to Brazil, by note to the foreign office, the sentiments of my Government relative to the quarantine discussion, a copy of which note is herewith appended. Upon the 8th instant the minister of foreign affairs advised me that his Government was pushing forward as rapidly as possible the establishing of additional lazarettos upon its coast, to which I immediately replied announcing the gratification with which this information will be received by the United States of America.

I inclose copy and translation of advice from the foreign office and copy of my reply thereto.

The foreign minister's note of November 9, 1892, referred to in the inclosed copy of Mr. Conger's note January 28 last, was discussed, and copy, with translation of same, transmitted in dispatch No. 350 from this legation to the Department of State.

I have the honor to be, sir, your obedient servant,

C. F. MARKELL.

To Hon. JOHN W. FOSTER,
Secretary of State.

BAHAMAS—*Green Turtle Cay—Abaco.*—Four weeks ended March 16, 1893. Population, 3,286. Total deaths, 3. No deaths from contagious diseases.

BRAZIL—*Ceara.*—Month of January, 1893. Population, 40,379. Total deaths, 123. No deaths reported from contagious diseases.

CUBA—*Havana.*—Under date of March 25, 1893, the United States sanitary inspector reports as follows:

There were 123 deaths in this city during the week ending March 23, 1893. Four of those deaths were caused by enteric fever, 2 by so-called pernicious fever, 1 by paludal fever, and 10 by diphtheria and croup.

FRANCE—*Nantes.*—Month of February, 1893. Population, 127,482. Total deaths, 240, including typhus fever, 1; enteric fever, 18; and diphtheria, 11.

GREAT BRITAIN—*England and Wales.*—The deaths registered in 33 great towns of England and Wales during the week ended March 18 corresponded to an annual rate of 19.9 a thousand of the aggregate population, which is estimated at 10,322,429. The lowest rate was recorded in Derby, viz, 13.9, and the highest in Bolton, viz, 29.3 a thousand.

London.—One thousand five hundred and seventy-eight deaths were registered during the week, including cholera, 1; smallpox, 3; measles, 21; scarlet fever, 30; diphtheria, 65; whooping cough, 46; enteric fever, 5; and diarrhea and dysentery, 18. The deaths from all causes corresponded to an annual rate of 19.1 a thousand. Diseases of the respiratory organs caused 338 deaths. In greater London 1,969 deaths were registered, corresponding to an annual rate of 17.6 a thousand of the population.

In the "outer ring" the deaths included diphtheria, 9; measles, 18; and scarlet fever, 5.

Ireland.—The average annual death rate represented by the deaths registered during the week ended March 18, in the 16 principal town districts of Ireland, was 22.6 a thousand of the population. The lowest rate was recorded in Dundalk, viz, 4.2, and the highest in Kilkenny, viz, 28.3 a thousand. In Dublin and suburbs 174 deaths were regis-

tered, including scarlet fever, 1; enteric fever, 3; whooping cough, 4; measles, 2; and diphtheria, 1.

Scotland.—The deaths registered in 8 principal towns during the week ended March 18 corresponded to an annual rate of 21.2 a thousand of the population, which is estimated at 1,447,500. The lowest mortality was recorded in Leith, viz, 14.7, and the highest in Dundee, viz, 27.5 a thousand. The aggregate number of deaths registered from all causes was 597, including measles, 45; scarlet fever, 6; diphtheria, 6; whooping cough, 6; fever, 1; and diarrhea, 5.

Dundee.—Month of February, 1893. Total deaths, 404, including smallpox, 1; enteric fever, 2; diphtheria, 1; measles, 87; and whooping cough, 3.

GUIANA—Paramaribo.—Month of January, 1893. Population, 29,231. Total deaths, 89. No deaths reported from contagious diseases.

INDIA—Singapore.—Month of December, 1892. Total deaths, 543, including "fever," 146; and smallpox, 1.

SWITZERLAND—Lucerne.—Month of February, 1893. Population, 22,000. Total deaths, 35, including 1 from smallpox.

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—						
				Cholera.	Smallpox.	Yellow fever.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.
London	Mar. 11.	5,849,104	1,991	7		11	27	48	28	...
Paris	Mar. 11.	2,424,705		1		9	2	34	8	25
Paris	Mar. 18.	2,424,705	999	1		6		28	8	23
Vienna	Feb. 25.	1,435,931	670	1		2	5	31	20	2
Calcutta*	Feb. 18.	681,560	365	15						
Glasgow	Mar. 11.	677,883	332	1		2	2	5		
Glasgow	Mar. 18.	677,883	306	2		1		5		
Hamburg	Mar. 11.	620,000	209			2	3	4		
Naples	Oct. 29.	527,586	243			4	1	3		
Naples	Nov. 5.	527,586	209			2		2		
Naples	Nov. 12.	527,586	242			4		3		
Naples	Nov. 19.	527,586	261			3		1		
Naples	Nov. 26.	527,586	242			2		6		
Naples	Dec. 3.	527,586	307			3	1	8	1	
Naples	Dec. 10.	527,586	317			1	2	3	1	
Naples	Dec. 17.	527,586	327			1		5	1	
Liverpool	Mar. 11.	517,980	216		12	1	2			
Liverpool	Mar. 18.	517,980	247	1	1	1	4			
Warsaw	Mar. 4.	490,417	211	7		1	2	5		
Brussels	Mar. 4.	482,158	179	1		3	1	4		
Rome	Feb. 11.	440,596	236			5		1		
Rome	Feb. 18.	440,596	215			2	1	5		
Lyons	Mar. 4.	438,000	197			1	1	2		
Lyons	Mar. 11.	438,000	186			1	1	6		
Amsterdam	Mar. 11.	426,480	160			4	1	5		
Amsterdam	Mar. 18.	426,480	161			1		1		
Munich	Mar. 11.	380,000	173			1	2			
Cairo	Mar. 2.	374,838	84			1				1
Odessa	Mar. 11.	315,900	127	4	1	5	1	4	1	
Dresden	Mar. 4.	305,140	130					6		

* There were 167 cases of smallpox during the two weeks ended March 18, 1893.

MORTALITY TABLE, FOREIGN CITIES—Continued.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—						
				Cholera.	Yellow fever.	Smallpox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.
Cologne.....	Mar. 18.....	297,935	118						13	1
Edinburgh.....	Mar. 11.....	267,672	71					1		1
Edinburgh.....	Mar. 18.....	267,672	86					3	1	
Belfast.....	Mar. 11.....	265,123	128			1	1		4	
Palermo.....	Mar. 11.....	250,000	91							
Antwerp.....	Mar. 11.....	248,296	90		6					2
Alexandria.....	Mar. 2.....	231,395	123		12			1		
Rotterdam.....	Mar. 18.....	222,230	106					1	3	2
Hanover.....	Mar. 11.....	191,400	139					5	5	2
Frankfort-on-the-Main.....	Mar. 11.....	185,000	78					8	5	
Prague.....	Mar. 11.....	182,538	105		2		4			
Genoa.....	Mar. 11.....	181,855	109					1		
Genoa.....	Mar. 11.....	181,858	118						3	2
Trieste.....	Mar. 11.....	158,054	76						2	
Christiania.....	Mar. 11.....	156,500	59					1		
Ghent.....	Mar. 11.....	153,290	54							4
Nuremberg.....	Mar. 4.....	151,893	58							
Hiogo.....	Feb. 18.....	148,118	95			46				
Hiogo.....	Mar. 4.....	148,118	97			49	1		1	
Funchal.....	Mar. 11.....	140,000	12						2	
Stuttgart.....	Mar. 18.....	139,659	34						2	
Bremen.....	Mar. 11.....	127,000	43						1	
Stettin.....	Mar. 11.....	120,600	59					1	1	
Catania.....	Mar. 12.....	111,000	35					1	3	
Aix-la-Chapelle.....	Mar. 11.....	107,385	40							
Gothenburg.....	Mar. 11.....	105,800	28					1		
Zurich.....	Mar. 11.....	104,406	41				1	6	14	6
Leghorn.....	Mar. 5.....	103,265	50				1			
Leghorn.....	Mar. 12.....	103,265	45				1			
Leghorn.....	Mar. 19.....	103,265	38					1		
Mannheim.....	Mar. 11.....	80,000	29						1	
Mayence.....	Mar. 11.....	72,281	40						2	
Leith.....	Mar. 11.....	70,972	26				1	1	2	1
Leith.....	Mar. 18.....	70,972	20					3		
Southampton.....	Mar. 18.....	65,621	22							5
Jerez de la Frontera.....	Mar. 4.....	61,708	41							
Port of Spain.....	Feb. 25.....	50,000	36					1	1	
Port of Spain.....	Mar. 4.....	50,000	24							
Marsala.....	Mar. 11.....	40,131	9							
Santos.....	Feb. 25.....	35,000	280	130	28					
Gibraltar.....	Mar. 12.....	25,755	5							
Schiedam.....	Mar. 18.....	25,533	9							
Vera Cruz.....	Mar. 24.....	25,000	23	2		2				
Girgenti.....	Mar. 11.....	23,847	8							
Cienfuegos.....	Mar. 18.....	20,000	15							
Cienfuegos.....	Mar. 25.....	20,000	23		1					
Kingston.....	Mar. 31.....	19,264	3							
Sagua la Grande.....	Mar. 18.....	18,109	5							
Sagua la Grande.....	Mar. 25.....	18,109	6							
Victoria.....	Mar. 18.....	16,841	7							
Flushing.....	Mar. 18.....	14,000	8							
St. Thomas, W. I.....	Feb. 10.....	12,019	36							
St. Thomas, W. I.....	Feb. 17.....	12,019	34							
St. Thomas, W. I.....	Feb. 24.....	12,019	31							
St. Thomas, W. I.....	Mar. 4.....	12,019	35							
St. Thomas, W. I.....	Mar. 10.....	12,019	31							
St. Thomas, W. I.....	Mar. 17.....	12,019	29							
Matamoras.....	Mar. 24.....	12,000	9							
Sonneberg.....	Mar. 12.....	12,000	5							
Guelph.....	Mar. 25.....	10,539	2							
Queenstown.....	Mar. 18.....	10,340	3							
Tuxpan.....	Mar. 18.....	10,280	3							
Clifton, Ont.....	Mar. 25.....	4,000	1							
Coaticook.....	Mar. 25.....	2,000	1							

Smallpox in 1892 (January 1-November 30).

[As reported to the United States Marine Hospital Bureau.]

Countries and cities where present.	Deaths.											
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
UNITED STATES.												
California:									1			
San Francisco quarantine					1							
Connecticut:										4		
New Haven										2		
Florida:											1	
Tampa								1				
Illinois:												
Chicago						1	1	1				
Massachusetts:												
Salem	1											
New Jersey:												
Newark	1	1	1	11	13	10	8	18	9	27	18	
New York:	12	7	3	11	13	10	1		1	2		
Brooklyn						8	7	8	2	6	9	
New York City		6	2	9	5	8						
Ohio:												
Pennsylvania:								1				
Coudersport								1				
Pittsburg							1			1		
Rhode Island:												
Providence			1		2							
FOREIGN.												
Austria:												
Vienna	3	9	2	1								
Belgium:												
Antwerp				1		3	4	3	6	5	3	12
Brussels	1	1	3					4	2		1	
Ghent	1	1	8	21	8	6	1					
Brazil:												
Pernambuco					1	1	1	1	1			
Rio de Janeiro b.	7											
Rio Grande do Sul					3	7	14	11	40	9		
Santos	26	39		32								
British Columbia:												
Victoria c.												
Canada d:												
Quebec			32									
Ceylon e:												
Chile:												
Talcahuano				17								
China:												
Hongkong				1	2	5		13	2		1	
Egypt:												
Alexandria	2	3	15	20	4	4	4	6		1		
Cairo		3	12	6	7	8	6	4	2			
England:												
Liverpool	3	2	2	1	9	2				1		
London	1		4	7	6	9	10			1		
Newcastle-on-Tyne						1						
France:												
Havre	1	1		3								
Marseilles	9	11	13	10	2	2	1				1	
Nantes								5	1			
Nice		1	3	2								
Paris	1	2	4	4	2	2	4	5		5	5	
Rheims	5	2	5	2	1	2	1	1				
Rouen				2								
Germany:												
Frankfort-on-the-Main							1					
Munich					2							
Prague	13	1	5	10	6	39	9	3	3	7	6	

a Twenty-seven cases reported June 6, 1892; epidemic over August 5, 1892.

b During period of four weeks ended March 19, 8 deaths.

c Epidemic of smallpox reported July 10, 1892; 71 cases to August 6, and 13 deaths.

d Epidemic began September 8, 1891, and ended February 5, 1892; there were 151 cases and 32 deaths during epidemic.

e During three months ended March 31, 1892, 23 deaths.

Smallpox in 1893 (January 1-November 30)—Continued.

Countries and cities where present.	Deaths.											
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Gibraltar.....												
India:												
Calcutta.....	1	6	2	2	4	1						1
Singapore.....	2				3	1						
Italy:												
Genoa.....	9	8	14	5	7	3	4	7	7	12	8	
Milan.....			1		1	1		2				
Rome.....				1					1	1		
Venice.....												
Japan:												
Hiogo.....			1			1	1		8	7	10	
Kanagawa.....	76	79	13									
Malta and Gozo.....	12											
Mexico:												
Vera Cruz.....		2										
Netherlands:							1	1				
Rotterdam.....					1		1					
Russia:												
Odessa.....	1	1	1		1	6	6	3	3	8	11	
Riga.....	1	1		3	1		4	10	12			
Warsaw.....	13	13	25	30	13	16	25	29	39	56	52	
Scotland:												
Glasgow.....											6	
Spain:												
Barcelona.....	14	26	32	17								
Cadiz.....	11	5	5	3	1	1	3	1				
Denia.....						1						
Jerez de la Frontera.....	1										1	
Sweden:							1					
Gothenburg.....							1					
Switzerland:												
Lucerne.....							3					
Zurich.....							1	1	1			
Turkey:												
Constantinople.....							16	9	6	9	2	

Yellow fever in 1892.

[As reported to the United States Marine-Hospital Bureau.]

Countries and cities where present.	Deaths.											
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
UNITED STATES.												
Gulf Quarantine a.....												
Key West Quarantine b.....												
New York.....	1											
Vineyard Haven.....												
Mullet Key (Tampa).....												
FOREIGN.												
Brazil:												
Bahia c.....												
Ceará.....	2	5										
Pará.....	20	15	20	7	31	14	8	3	14	11	5	
Pernambuco.....				2		1	1					
Rio de Janeiro d.....	46											
Rio Grande do Sul.....												
Santos.....	389	206	50	77	8							
Costa Rica:												
Punta Arenas.....		1			1							
Cuba:												
Cienfuegos.....	3	3	1					1	1	1	1	
Havana.....	15	10	1	1	7	10	28	69	75	53	53	
Santiago de Cuba.....			2	1								
Ecuador:												
Guayaquil.....	78	50	5									
Guiana:												
Parimaribo.....							2	1				
Jamaica.....			1									
Japan:												
Kanagawa.....		76										
Mexico:												
Tuxpan.....				9	14	20	58	46	2	2		
Vera Cruz.....								15	12			

a Four cases on British steamship *May* on arrival from Vera Cruz in September.

b Eight cases in August; all recovered.

c Report dated February 9, 1892, gives 6 cases and 1 death since beginning of year.

d Four weeks ended March 19, 1892, there were 695 deaths reported.

By authority of the Secretary of the Treasury:

WALTER WYMAN,

Supervising Surgeon-General Marine-Hospital Service.

